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TABLE OF CONTENTS

| <i>Chapter</i> | <i>Page</i> |
|---|-------------|
| Introduction | 133 |
| I. Financial Planning and Support of Education..... | 134 |
| EUGENE S. LAWLER, <i>Northwestern University, Evanston, Illinois</i> | |
| II. Budgeting in Public Schools..... | 143 |
| HARRY P. SMITH, <i>Syracuse University, Syracuse, New York</i> | |
| III. Accounting, Reporting, and Supply Service..... | 147 |
| JAMES E. ALLEN, JR. and RICHARD C. LONSDALE, <i>Syracuse University, Syracuse, New York</i> | |
| IV. Educational Costs and Their Analysis..... | 155 |
| WAYNE W. SOPER, <i>State Education Department, Albany, New York</i> | |
| V. Regulation of Credit to Boards of Education..... | 163 |
| WILLIAM P. MCLURE, <i>State Education Department, Albany, New York</i> | |
| VI. Relation of School District Reorganization to Finance and Business Administration | 167 |
| CALVIN GRIEDER, <i>University of Colorado, Boulder, Colorado</i> | |
| VII. The Financial Aspects of Public School Transportation..... | 178 |
| JAMES CAMPBELL, <i>Cornell University, Ithaca, New York</i> | |
| VIII. Principles of Business Administration Applied to Personnel and Other Activities | 183 |
| HARRY P. SMITH and JOHN B. BOUCHARD, <i>Syracuse University, Syracuse, New York</i> | |
| IX. The Direction of Movement in Finance and Business Administration | 190 |
| WAYNE W. SOPER, <i>State Education Department, Albany, New York</i> | |
| Index | 194 |
| | 129 |

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1967

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INTRODUCTION

THIS number of the REVIEW OF EDUCATIONAL RESEARCH is the sixth to be devoted to finance and business administration. Previous issues have appeared in April of 1932, 1935, 1938, 1941, and 1944. This issue follows in a general way the plan of previous numbers, but a few changes in titles and organization of the sections have been made.

The number of chapters has been reduced to eight. Some topics appearing heretofore under one heading have been shifted to another in the belief that they logically belong under the captions where they are now placed. Two former chapters dealing with planning in finance and business administration, and the support of education have been combined to make a single chapter (Chapter I) which deals with financial planning and the support of education. This combination resulted from the fact that both the bibliographies and contents of the separate chapters overlapped to a great extent. Internal school accounting has been included in Chapter III which deals with accounting in general.

In reviewing research on transportation and school district reorganization this report is limited primarily to the financial aspects of those areas. It was felt that the other aspects were adequately treated in a preceding number (Volume 16, No. 4, October 1946) of the current cycle of the REVIEW.

In general, the review is limited to published material appearing between October 1943 and October 1946. While there was some pertinent material in the form of unpublished masters' theses and doctoral dissertations, it was felt that few of these would be available to any except specialists.

HARRY P. SMITH, *Chairman,*
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CHAPTER I

Financial Planning and Support of Education

EUGENE S. LAWLER

THERE is evidence that school finance as a field of study has matured. In *Paths to Better Schools* (1), it was stated that problems in the field were more often recognized as associated with political theory, public finance, and economics. It was pointed out that in 1938 both the Regents' Inquiry in the State of New York and the President's Advisory Committee on Education treated school finance as a part of an integrated whole and that Burke's volume, *Defensible Spending in Public Schools*, published in 1943, continued this trend. Fowlkes (11) stressed the relationship between school finance and other public finance, and the need for modernizing existing fiscal legislation for greater efficiency.

The intimate interrelationship between education and all aspects of the culture and economy was shown in *Building a Better Southern Region* (21) where the soil, water, forest, mineral, and wild life resources, technological deficiencies, financial dependency, and the traditional attitudes, were all taken into account. Westhagen (42) showed how the deterioration of city areas and the lessening of ability to support education is due to neglect and obsolescence rather than to any necessary aging or depreciation of buildings.

The Extent of Formal Education

Hughes and Lancelot (14) compared the forty-eight states and the nations of the world as to the amount of schooling their citizens possess. They presented data from many nations showing the percent of the population six to twenty-one years of age in school. The percents for six nations were: United States, 78.5; Canada, 72.7; Russia, 66.3; Great Britain, 64.6; Germany, 59.0; and Japan, 52.2. The percents of the population eighteen to twenty-one years of age in college were: United States, 14.6; Canada, 6.2; Russia, 6.0; Great Britain, 3.6; Japan, 3.2; and Germany, 3.0. They also listed the states in order of their educational accomplishment, which they defined, in effect, as the extent to which the population attends school. Utah, Oregon, and Washington headed the list, while Alabama, Arkansas, and Mississippi closed the list, in that order. These authors reached the general conclusion that education is the decisive factor in the welfare of a people.

The Committee on Education of the U. S. Chamber of Commerce (39) showed a high correlation between years of school completed and the rental value of homes, and between the years of school completed by citizens of cities and of states, and retail sales.

Warner, Havinghurst, and Loeb (41) studied individual students in

three representative American cities, and brought out the importance of the provision of adequate opportunity for all.

The Importance of Equalization

Conant (5) showed the necessity for complete equalization of opportunity from the nursery school thru the university and professional school for the fulfilment of our national ideals, and the impossibility of its attainment under our present social and governmental organization. His conclusion was that our system of government should strive for the utmost equalization practicable.

Contrasted to the showing of the necessity of adequate educational opportunity is the showing of other studies of the enormous inequalities in the financial support of education. Norton and Lawler (30) revealed that there were 38,000 pupils in elementary schools supported at a level of \$100 per classroom unit per year, at one end of the scale, with 19,497 pupils in schools supported at a rate of \$6000, or more, per classroom unit at the other extreme, a ratio of one to sixty. Data presented for each of the forty-eight states showed that in the majority of states the schools most liberally supported received from five to ten times as much as the poorest schools.

This study revealed other highly significant data, giving the number of pupils and the number of classroom units at each level of support. While the median expenditure of all schools in the United States was \$1649 per classroom unit, there were classrooms supported at rates as low as \$100 per classroom, or less, while others were supported at a rate of \$6000, or more. Counting from the lowest 0.25 percent of classroom units to the highest 0.25 percent, they showed that the range of expenditures in the southern states having segregated schools was from \$200 to \$3600 with a median expenditure of \$1166 per classroom unit for white children. For Negro children the range was from less than \$100 to \$3300 with a median of \$477 per classroom unit. In states which did not have segregated schools the range of expenditures was from \$400 to \$5500 per classroom unit with a median of \$2199. In New York State the range was from \$800 to \$6000; in Minnesota from \$500 to \$6000; and in Utah from \$1200 to \$2200. In Mississippi the range was from \$300 to \$2200 for white children but for Negro children it was from less than \$100 to \$600.

By the use of these data it was possible for the first time to compute with some accuracy for the entire United States, as well as for individual states, the amount required to raise all the schools below any given level of support up to that specified level. It was calculated that to raise all the schools in the United States below that level up to \$600 per classroom would require \$21,000,000. To raise them all to \$1200 per classroom would require \$151,000,000; to \$1800, \$420,000,000; and to \$2400, \$799,000,000.

Lawler in the Washington Survey (35) showed that the range in equalization of expenditures of the forty-eight states extended from

Arizona, which could have achieved complete equality of expenditures in all its school districts by transferring only 3.8 percent of its total expenditures from its high expenditure districts to its low expenditure districts, to Mississippi, which would have had to transfer 34.3 percent of its expenditures to obtain the same results.

Lawler (35) also found that the percent of extra cost for small schools in rural territory varies from 3.6 in New Jersey to 88.4 in Nebraska, with a median of 20.6 for the forty-eight states.

A point that must be considered in all state support and equalization systems is the differential between the cost of high-school pupils and elementary pupils. Norton and Lawler (29) discovered that the 1930-31 average cost per high-school pupil, which was 1.7 times the average cost per elementary pupil, had changed by 1939-40 to only 1.33 times the average elementary per pupil cost. The reason for this change was twofold. In the intervening years elementary and high-school classes more nearly approximated one another in size. The high-school teacher in 1939-40 received 1.23 times as much salary as the elementary teacher rather than the previous ratio of 1.29 in 1930-31. Thome (36) found that data for Michigan agreed roughly with the national data reported by Norton and Lawler. He also secured the opinion of a large jury of experts on a series of statements relative to class size and other factors related to the differential between high-school and elementary-pupil costs. The experts' answers indicated strongly a feeling that there should be no discrimination in salary or class size between the high school and the elementary school. On the basis of this evidence Thome recommended that state aid formulas should recognize no differential between high-school and elementary grades.

Paths to Better Schools (1) demonstrated by differences in birth rates, differences in present educational status, and the mobility of population, that there must be a revision of the support for education.

Fees in Public Schools

It is sometimes forgotten that some public schools are not effectively free, even as regards tuition and supplies. Tyler's study (38) of the fee situation in Tennessee showed that in spite of an opinion of the attorney general who had declared it illegal, fees were being charged in some schools. Tyler found further that the very subjects for which fees were reportedly most often charged were not the college entrance subjects but subjects such as typewriting, home economics, agriculture, and shop—subjects most appropriate to pupils of lower socio-economic status. He discovered that in many cases these practices had a decisive effect in deterring pupils from attending school.

Reorganization of Administrative Units

The financial aspects of the reorganization of local school units was touched upon by Bingeman (3) who concluded that in the case of Lancaster County, Pennsylvania, if the size of the local unit was increased the total

amount spent on education would be increased, but the educational benefits would be increased much more proportionately. Travis (37) found that a modern centralized local tax collecting system could save the state of Pennsylvania \$4,000,000 annually, of which \$1,600,000 would be the schools' part.

Sources of Support

New taxes have been enacted for the support of state governments and schools. The *NEA Research Bulletin* (27) showed a change from twenty in 1929 to thirty-four in 1938, and to thirty-two in 1943, in the number of states using the personal income tax; a change from sixteen in 1929 to thirty-one in 1938, to thirty in 1943, in the number of states using the state corporation tax, a change from two in 1929 to twenty-three in 1938, to twenty-three in 1943, in the number of states making use of state tobacco taxes. It was found that there was a trend toward supplying aid for schools from the general funds of the state. This was in accord with the finding of Snoke (33) whose conclusion was that temporary expediency appeared to be the only justified argument to support the case of earmarked taxes.

In the case of local school units the adoption of new types of taxes is more difficult. Macy (18) reported that "the property tax must continue to be used as the chief source of funds to be raised directly by local school districts." He found further that state funds for schools should be obtained chiefly from income taxes, and that altho pressure for their use was strong, consumption taxes should be avoided.

In the field of higher education, Russell's analysis (32) showed that the largely increased revenues required must come not from endowments, or gifts, or student fees, but from governmental funds. In this same area Goldthorpe (13) showed that gifts for philanthropic purposes did not begin to approximate the amount that could be counted tax exempt under the income tax law.

Definition of Minimum Program

Some writers have not been willing to allow equalization of opportunity to depend upon the provision of a reasonable amount of support in each administrative unit. Morphet (19) advocated that each state should plan an adequate and balanced minimum program of services, and then provide sufficient finances to support the program. A similar view was expressed by Cunningham (6). The bulk of opinion has been for allowing each administrative unit wide discretion in apportioning its expenditures. It will be worth noting whether proposals such as these for greater detail of specification for minimum programs of education gain ground. An example of an equalization plan proposed which did not involve the specification of details in the minimum program was that proposed by Simpson (34). In this study an equalization plan was formulated in spite of the fact that in California state aid was tied up in the form of constitutional flat grants.

Measures of Ability To Support Education

In formulating or comparing equalization programs, it is necessary to determine how much revenue can be raised. In comparison between states Norton and Lawler (30) used income per inhabitant. Hughes and Lancelot (14) used income per child. Income, as reported by states by the U. S. Department of Commerce, will probably form the basis of the most frequently used measures in comparisons of ability among the states. This will be in spite of the fact that some states, as pointed out by Newcomer (28), have been able to shift some taxes to nonresidents. The amount of such shifting by West Virginia was slightly over \$3,000,000 per year.

Since income data are not as yet available for cities, other measures such as value of retail trade, rental value of residences, and the wage level, will be used to supplement the estimated full value of taxable property, when comparisons of ability to support education have to be made, as in the St. Paul Survey (31). Data from another measure, useful in comparing cities, the proportion of total governmental expenditures devoted to schools, for most of the larger cities of the nation were contained in the bulletin *School Expense Compared with Combined City and School Expense, 1941 and 1942* (2).

Relationship of Expenditures to Excellence of Educational Program

In the difficult area of the relationship of expenditures to the excellence of schools, the study sponsored by the Educational Conference Board of New York State (9) described the average educational programs of schools financed at \$75, \$115, and \$150 per pupil. The statistical background supporting the descriptions in this study was given by Vincent (40), who measured relative diffusion of desirable practices into schools on the three levels of support. Burke (4) analyzed the services rendered in New York schools and proposed a minimum program costing \$140 per elementary pupil and \$170 per high-school pupil.

Another incidental attack on the problem of the relationship of the excellence of an educational program and its cost was made by Jenkins (15) who showed that there was a coefficient of correlation of from minus 0.83 to minus 0.86 between the percent of draftees rejected for lack of education and intelligence, and the amount spent per pupil on public schools, whether the draftees were white or Negro.

Assessment Practices

The proper assessment of property for purposes of taxation frequently has attracted attention, as in the Washington State Survey (35). In that case, it was recommended that assessments be improved by upgrading the position of the tax assessors, and giving the state tax commission and the courts greater jurisdiction over them.

The problem of assessment in Michigan caused MacConnel (17) to work

out a formula containing the factors of assessed valuation, state equalized valuation, sale value of real property, sales tax, and motor weight tax, to measure the fiscal capacity of local units in Michigan.

Estimates of the Costs of Education

There has been planning as to what the educational system should be in the postwar years. The cost of a satisfactory program of education from nursery school thru the high school was estimated by the NEA Research Division to be \$4,592,700,000 per year (26). An estimate of the cost of the proposed high-school program was \$1,944,200,000 per year instead of the present \$800,000,000.

Federal Aid to Education

All studies examined which touched the matter recommended federal aid for education. The Educational Policies Commission (24) stated that aid for education was an obligation of the federal government and laid down several principles, some of which were: (a) that general grants were preferable to special grants; (b) that the amounts of aid should be determined on an objective basis; and (c) that any requirement that states match federal funds was undesirable because such an arrangement would favor the richer states which have ample resources to match federal funds, and would therefore be at an advantage over the states needing more aid. Such an arrangement would also tend to throw budgets out of balance in favor of the aided activity.

The Educational Policies Commission (24) came out flatly for the administration of education by the states and localities. Its recommendation can be taken as representing the almost unanimous opinion of the profession. Mort (22) reviewed the question of the separability of finance and control and came to the conclusion that there is no evidence of any necessity, or desirability, for "control to follow support" either in the relations of states to localities, or of the federal government to the states. His conclusion was that "we should not try to allocate control on some mathematical basis in terms of the relative fractions of our taxpayer dollars collected by our federal agents, our state agents, and our local agents." Morphet (20) pointed out that the one sure way to avoid federal control is to get federal aid without control. This same idea was developed by the Educational Policies Commission (25).

Lindman (16) presented a general formula to apportion federal aid among the states on a variable matching basis so that, for instance, the poorest state might receive two dollars in federal aid for each dollar it raised, while the richest state might receive only ten cents for each dollar. Such a system would have great flexibility in that no specific rate of state or local contribution would be required. On the other hand, the extreme disparities in the support of schools which have been maintained far below any reasonable level have caused many to believe that each state

should be required to keep all its schools up to some reasonable level of support in order to receive its full amount of aid.

Private and Parochial School Aid

The question of aid to private and parochial schools has been frequently raised in connection with federal aid. The Educational Policies Commission (25) took the stand that federal aid should be granted only for use in schools for which the state recognizes public funds to be available. On the other side, Wise (43) argued that the public school from which religion is excluded is a victory for the non-religious elements of the nation. He cites the experience of Scotland and other countries to show that aid to religious schools has given satisfaction. Donohue (8) stated that Catholic authorities have regarded their schools as having a right to aid from taxation, but that it has been generally recognized that the expediency of asserting this right by demanding state aid for parochial schools varied with the circumstances. Federal aid would be a new venture involving a considerable increase in taxation in those states where the Catholic population is relatively large.

Checklists and Guides

The formulation of checklists which aid in making operation more efficient can be a most useful form of research. Mulford (23) has presented the salient facts with regard to school borrowing in short compass. He made a point of the fact that school districts with good credit ratings were able to borrow funds for an interest rate of from 1 to 2 percent, of which some districts have been unaware. The volume, *Building a Better Southern Region Through Education* (21), has a list of particulars with regard to the definition of a minimum program which should be useful to those who accept the idea of a fully specified minimum program.

Public opinion is of vital importance to education, but so far education has made relatively little use of the newer opinion sampling technics. Givens (12), however, reported a study of the Denver Public Opinion Research to the effect that approximately 80 percent of American citizens were in favor of federal aid, and that 80 percent were also in favor of the states retaining control of education.

The educator has to guide or lead public opinion as well as follow it. The Florida Citizens Committee (10) has prepared a guide for use by study groups thruout the state, which goes into the financing of education as well as other aspects of organization and administration.

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CHAPTER II

Budgeting in Public Schools

HARRY P. SMITH

BURKE (6) defined a public budget as "a well conceived program of governmental action for a given period of time, with reasonably accurate plans for making the financial outlays involved and raising the necessary revenues." **Good** (10) defined a budget as "an estimate of proposed expenditures for a given period or purpose and the proposed means of financing them." This he followed with definitions of a number of terms used in budgetary procedure. **Grose** (12) described the evolution of the budget from a purely financial plan, including spending and financing, to the present concept of an educational document of which the financial document is only a part. He then gave ten principles of the educational program based on a clearly defined philosophy of education expressed in terms of definite objectives together with the means of attaining them. This he insisted should be reviewed each year and then incorporated in the budget in summary form, tho its elements should ramify every part. But it must be tempered to the known financial ability of the school district to the end that both the educational program and the financial program will be balanced. The American Association of School Administrators (1) held that the school budget is but a single phase of public budgeting. The document, the most important financial document of a school system, should be set up on both a functional and an object basis, and the requests should be reviewed in the light of unit costs.

Budget Reviews

Bolmeier (5) revealed that there are almost as many degrees of municipal fiscal control expressed in law as there are cities governed by special acts. Different interpretations upon these acts further complicate the situation. He found the courts usually holding that boards have control over specific items and reviewing bodies can cut only lump sums unless the law makes other provisions, a situation that exists in some cities. The control ranges from advisory power only, to the power legally to reduce or eliminate specific items. Controls are exercised by various bodies; e.g., the board of estimate and apportionment, the county budget commission, the county excise board, either thru direct cuts or thru their control of the tax levy. **Burke** (6) summarized in detail the arguments for and against fiscal dependence and then stated that the researches are inconclusive on this point. **Mort** (16) took the position that the review of the budget by a district meeting or by a reviewing body is an opportunity for a much broader conception of the educational program on the part of the public. He held that the democratic principle "demands broad participation of the public at large in important matters of school policy affecting the

budget or educational program." Burke insisted that fiscally independent boards must cooperate with the boards of other taxing units to maintain a proper balance.

Preparation of a Budget

Mort (16) held that the formulation of the budget demanded a far broader conception of participation by both the professional and lay groups. He stated that budgetary procedure may be highly standardized in similar school districts. Adequate budgetary procedure, he thought, will make it possible to dispense with much of the legal auditing now required. He insisted on long-term planning to insure stability and avoid sudden up's and down's. Burke (6) also stressed the long-term aspects of school budgeting. Stumpf (22) distinguished between an "appropriational" and an "estimative" budget. The former was based on the assumption that once an appropriation is included in the budget it may be expended without further consideration of its desirability. Kulp (13) appraised the present procedures of Ithaca, New York, after five years and contrasted it with their earlier work. Spears (21) suggested six principles of determining the salary budget, but insisted that studies be made to determine the ultimate effect on district finances and ability to pay. He cited a study of forty-five high-school districts in the Chicago area, only seventeen of which could follow the schedules which they had formulated.

McClintic (14) named the states that permit the creation of reserves which he considered a type of long-term budgeting. DeLong (9) described the procedure of Oil City, Pennsylvania, and McCunn and Sachs (15) insisted that a school budget is a means of achieving a program of education and indicated how to prepare and administer a budget to achieve that end. Walker (24) described the formulation of a county school budget, while Ayer (3) and Berry (4) outlined local practices. Skogsberg (20) advocated the formation of community groups to prepare cooperatively a budget which is presented to the board. He also stressed what he calls "educational atmosphere" which had a bearing on the budget. Rosenstengel (18) applied the principles of budgeting to school plant plans indicating the possible sources of revenue and nine categories of expenditures together with the proportion of the total assigned to each—a good checklist. Crawford (8) described the Ann Arbor method of budgeting educational supplies based on a five-year average. *The School Executive* (19) summarized data from twenty-five large cities indicating increasing school library appropriations.

The Administration of the Budget

Both Mort (16) and Stumpf (22) emphasized the "appropriational" type of budget which authorized specific appropriations on the basis of which the services and objects designated can be secured without additional action on the part of the appropriating body. Asfahl (2) described a simple visual device for controlling budget appropriations. Church (7)

gave reasons for variations in financial forecasting. The fiscal officer has control over some of these; e.g., negligence, "padding," lack of effort to collect taxes, activities not anticipated, clerical errors, and appropriation of same amounts year after year. But he does not control delay in state aid, payment of bills of previous years, poor economic conditions, and decrease in assessments. He secured the judgments of twenty-four specialists in public and school finance and thirty-five superintendents of third-class cities in Pennsylvania relative to the allowable errors in receipts and expenditures. The arithmetic mean of their composite judgments on the allowable error in receipts was 3 percent and in total expenditures, 2.5 percent.

Thurston and Church (23) studied the actual variations in expenditures from the budget estimates of ninety-one third-class districts in Pennsylvania. They found 52.2 percent of estimates of receipts in error by more than 20 percent, and 33.7 percent of expenditure estimates similarly in error. In fact, 48 percent of the receipt estimates and 16 percent of the expenditure estimates were in error by more than 50 percent. Fifty-nine of the fiscal officers involved reported reasons, among which, unanticipated activities, general lack of funds, improper accounting, and negligence, were cited as most important. They concluded that the budget does not control due to non-functional organization, lack of trained fiscal officers, a non-accrual accounting basis, and inadequate auditing. Grieder's (11) study of 291 Colorado school districts showed wide ranges in percents appropriated to various functions; e.g., general control, 0 to 10.1 percent; instructional service, 25.6 to 91.5 percent; plant operation, 0.8 to 28.2 percent; auxiliary services, 0 to 45.1 percent; and debt service and capital outlay, 0 to 53 percent. He concluded that generally speaking there was a lack of sound budgetary procedure which he attributed in part to a weak state department of education with little conception of education as a state function.

Reavis and Henry (17) listed the articles and books on public-school administration including several that directly concern school budgetary procedures.

General Appraisal and Needed Research

It is clearly evident that the principles of budgetary procedure are far in advance of budgetary practices if the studies of Church (7), Grieder (11), and Thurston and Church (23) may be considered as revealing fair samples of such practices. But further studies are needed involving large numbers of districts in different states. The training of fiscal officers and the relationship of this training to sound budgetary procedure merit careful study. Whether the profession has the last word in budgetary procedure as suggested by Mort (16) merits some attention. The degree in which various types of budget reviews result in a better understanding of the whole educational program is worthy of serious thought. Studies

of the technics used in estimating costs of supplies, equipment, and non-instructional services should be revealing. Finally, there should be a comprehensive study of the compliance of school executives with the specific provisions of budget statutes in the states which have enacted them.

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CHAPTER III

Accounting, Reporting, and Supply Service

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and

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FUNDAMENTAL principles of financial accounting, reporting, and purchasing were set forth for the guidance of boards of education in *School Boards in Action* (1), the Twenty-Fourth Yearbook of the American Association of School Administrators. In this volume it was urged that school accounting, reporting, and purchasing methods be modernized, articulated, and lubricated by ample funds and trained staff so as to produce clear and accurate reports.

Financial Accounting

McCunn and Sachs (20) maintained that cost accounting, scheduling of students into classes, child accounting records, the testing program, and registration of students for employment are as essential in a well-planned, integrated accounting program as financial accounting, physical inventory, and accounting of extracurriculum activities. They discussed those phases of the Pasadena accounting program.

A modern mechanized accounting procedure for a city-school system was reported by Mueller (23). He described how it was possible to speed up payroll accounting so that all postings of bills and payrolls, transfers from inventory, as well as previous balances carried forward, could be completed by the third of the month following.

Dissatisfaction with the traditional system of classifying school expenditures for accounting was expressed by Miller (21). He suggested a new basis of classification more functional in character, designed to secure comparable data according to the following headings: administration, instruction, housing, transportation, health service, school lunches, community center service, and tuition.

Odegard (24) gave seven reasons why school districts should keep employees' compensation records: (a) provide invaluable permanent records, (b) make income tax data readily available, (c) make information for employees available at a glance, (d) help employee morale, (e) increase accuracy in payroll accounting, (f) save time, and (g) provide basis for much valuable supplementary information.

Pattington (26) recommended a system for keeping transportation records in a small school system.

Internal School Accounting

Increasing concern for the more prudent handling of student activity funds was indicated in the literature for the three-year period covered by

this review. Elsdon (8, 9, 10) analyzed procedures and practices of auditing internal school accounts in sixty cities, 100,000 or more in population. He found that thirty-three of these school systems used a centralized system of auditing, while twenty-seven used a decentralized system. On the basis of this and other findings he concluded (a) that the centralized system of auditing internal school accounts is more efficient technically, but not so good from an educational viewpoint; (b) that there is little evidence that students are participating in the auditing of internal accounts. He recommended that (a) an auditor should not participate in any way in the approval of payments, the planning of income, or the keeping of records of the accounts being audited; (b) auditors should appraise the effectiveness of existing policies and procedures for the administration of student funds; (c) the steps in audit procedure for the verification of income and receipts and for the verification of expenditures and disbursements should be carefully followed; (d) the bank accounts for student funds should be given proper identifying titles; (e) auditors should satisfy themselves that services have been rendered and materials received for which invoices have been paid during the last few days of the school year; (f) at the end of the year surpluses and deficits should be transferred to one general account in order that funds may be allocated from this fund for the benefit of any activity needing an appropriation; (g) auditors should consider a greater use of test-checks; and finally (h) the complete audit report submitted should contain a statement of cash receipts and expenditures and a balance sheet. In the appendix of his study, Elsdon (8) presented a "Manual of Instructions for the Auditing of Internal School Accounts."

Wherry (40) studied the financial management of extracurriculum activities in secondary schools in Pennsylvania with enrolments of 500 or more students. He found that (a) only a few boards of education had adopted rules and regulations for the financial management of extracurriculum funds, but that in more than one-half of the schools studied administrative officers had made such rules; (b) in more than three-fourths of the schools, students are allowed to participate in the financial management; (c) in most schools student funds are not being properly safeguarded; and (d) the larger schools use better financial procedures than the smaller schools. He made six recommendations for improving the financial management of extracurriculum funds: (a) all funds should be consolidated in the care of one official, other than the principal, who should act as treasurer of these funds; (b) for educational reasons, students should be permitted to participate in the financial organization of extracurriculum activities as student treasurers, bookkeepers, tellers, and financial secretaries; (c) there should be standardization of the types of extracurriculum funds, considered a part of the accounting system managed by the school treasurer; (d) the central treasurer should act only as the custodian and disbursing agent of extracurriculum funds, the authority to expend moneys should rest with some other official; (e) a

consolidated extracurriculum budget should be prepared for the whole school by a committee of faculty and students; (f) extracurriculum funds should be more adequately safeguarded and supervised.

The recommendations of a committee of Kansas high-school principals which made a study of school activity funds in that state were reported by Cleland (3). Seven recommended standards were given together with numerous exhibits of forms selected from the best in use in Kansas high schools. The standards dealt with surety bonds, accounting for receipts, accounting for disbursements, type of book for keeping accounts, monthly summary statements, auditing of accounts, and budgeting of accounts. It was also recommended that separate accounts be maintained for federal taxes and state taxes.

Kelly (16) and Gillespie (14) described the systems of centrally administered student activity accounts in two medium-sized city-school systems. Baxa (2), Roemer (29), and Thomasson (36) gave accounts of the operation of student banks for the handling of extracurriculum activity funds in which the students perform all the functions of a regular banking system. Roemer reported that students are supervised by a bank employee and a commercial teacher; the students receive high-school credit in banking for their work.

Reporting

Proposals for the preparation and presentation of reports were made by the National Conference on the U. S. Office of Education statistical program conducted in October 1945 (39). After reviewing the purpose and scope of the statistical program of the U. S. Office of Education, several recommendations were made which, tho directed primarily to the work of the office, apply in large measure to reporting procedures of state and local school systems. Stressing the importance of planning publications for different groups of readers, the following types of publications were suggested: (a) processed preliminary releases, with brief textual analyses, in which speed of reporting is the prime consideration; (b) popular editions of bulletins, which will be designed not for archival reference purposes, but to catch the reading interests of the general public only casually interested in education; (c) special studies of immediate interest to deliberative groups and to administrators and teachers, dealing with current problems and offering suggestions to guide practice; and (d) basic reports, for reference and further research purposes, having both current and long-time value. It was also suggested that various means of presentation in addition to printing, such as large charts, slides, and filmstrips, should be explored in the attempt to get important data before a wide audience.

A new type of report dealing with the financial operations of an institution of higher education was published by the University of Illinois (38). This bulletin, of the type suggested in (b) immediately above, presented in graphic and interesting fashion the story of how a large state

university was supported and how it spent its money for the fiscal year in question. While this type of report is not new in the field of public-school financial reporting, it marks a new development in financial reporting in institutions of higher education. Cogen (6) described the successful preparation of a similar type of financial report by the faculty treasurer of student activity funds in a Bronx high school. The report is reproduced in his article. Ullrich (37) presented a checklist for the evaluation of pictorial public-school reports. The checklist was divided into two parts: (a) mechanical make-up and (b) style, language, illustrations, and arrangement.

Supply Service

As in the past, very little research was reported on the subject of supply service during this period. It is probably reasonable, however, to surmise that some of the current practices reported were developed after research had been conducted in those school systems or areas where the reports originated. To that extent, then, some of these reports may be an indirect reflection of research.

The committee on supply and textbook management of the Southern States Work-Conference on School Administrative Problems (22) analyzed its problem as follows: (a) exploration and utilization of local, state, and regional resources in the services of school supply; (b) development of an administrative organization; (c) selection of materials; (d) procurement of instructional and custodial supplies; (e) distribution, use, and conservation of supplies; and (f) provision for fiscal information, records, and reports. In commenting on state and local relations to the supply service, the committee recommended that state functions should be supporting and supervisory, rather than controlling.

Lewis and Burns (17) emphasized that supplies must be selected in terms of educational purposes. To avoid unnecessarily high cost, the quality standard should be set at the lowest level which will meet the need effectively. These questions should also be considered: (a) Does the company have a fair service policy? (b) Has the item proved its merit? (c) Can items be bought on an open specification? (d) Is the item packaged economically? (e) Can tests and analyses be applied locally to the items? Cocking (4, 5) similarly discussed the whole problem of supply service, adding that there also must be provision for the efficient use of supplies, equipment, and furnishings. He enumerated eleven specific steps in the selection of supplies and equipment. Sawyer (31) urged the concentration of responsibility for supply service in one office. He listed as requisites of good supply service proper organization, efficient procedures, knowledge of legal relationships, close interdepartmental relationships, pleasant salesman relationships, attention to quality as well as price, expediting orders, disposing of surplus property, and efficiency in receiving, inspecting, and storing.

In a report of research concerning supply service, Pierce (27) described his normative survey, made by use of a questionnaire, in which he can-

vassed 1050 outstanding elementary-school teachers in Pennsylvania to determine (a) what supplies are essential to good teaching and (b) what quantities of these supplies are needed. Supplies were classified on a checklist as teachers' desk supplies, classroom supplies, pupils' supplies, and art supplies. Items which were checked by 75 to 100 percent of the respondents were placed in a "critical list"; those checked by 50 to 75 percent, in a "desirable list"; and those checked by less than 50 percent, in an "optional list." Using a combination of his critical and desirable lists as his basis, the author estimated that approximately two dollars per pupil should be allotted for elementary-school instructional supplies (at 1940-41 catalog prices). Among his other findings was the fact that most teachers need to buy for their own use other supplies not furnished, to the extent of an average of \$9.09 per grade teacher in towns and \$27 per rural teacher.

Pattington (25) suggested greater efficiency in planning and purchasing new equipment by "picturing" each room on paper, showing the proposed layout and location of rooms and buildings to be furnished. Davison (7), Flora (12), and Smircina (33) described purchasing systems, respectively, in a small school system, a small city system, and a large city system.

Four articles dealt with the purchasing of specific types of supplies. Farnam (11) reported on the program of food purchasing for the school cafeterias at Cleveland Heights, Ohio. She recommended the determination of need in accordance with the requirements of the particular food service, and also, the establishment of specifications or buying guides to set standards for products to be purchased. She stressed the principle that the best quality food should be bought, within the limitation of what a school can afford. A good analysis of the merits and demerits of various types of sanitary supplies for use in school buildings was presented by Seagers (32). His study would be very helpful to school custodians, purchasing agents, and building superintendents concerned with the most economical and efficient types of sanitary supplies. Textbooks are purchased under a system of competitive bidding in Chicago (30) where a Bureau of Textbooks and Building Survey administers the textbook supplies. Before bids are requested, twenty-four committees in as many subjectmatter areas evaluate and approve sample textbooks submitted by publishers. A somewhat different procedure used in another school system for selecting and adopting textbooks was described by Godwin (15). During the first months of the school year teachers study and recommend books to be replaced. Companies are then notified to submit books for consideration. During the remainder of the year committees of teachers review the books and make recommendations to the superintendent for adoption and purchase.

The Supply Inventory

The taking and maintaining of inventories received the most attention of the phases of supply management. George (13) divided into five principal operations the process of taking a school inventory: planning,

preparation, taking the inventory, pricing the inventory, and summarizing the results. Smith (34) described principles and forms used in the taking of inventories in the Baltimore system. Smith (35) explained a record system for maintaining a useful and accurate inventory in a small school system. Mattier (19) applied to the problem of keeping a permanent inventory an idea similar to that of Pattington (25), referred to above. He showed, by means of an accompanying sketch, how carefully labeled floor plans can be used with attached lists to show the name of each article, its quantity, and the unit-cost.

In Bridgeport, Connecticut, (28) the problem of maintaining a perpetual inventory of textbooks was solved by using IBM punched cards and master report sheets which recorded for each school and for each type of book the title, publisher, description of book, grade in which used, number of classes using it, number usable, number to be rebound, and the number to be discarded. This inventory, first taken about four years ago, is brought up to date periodically.

In an interesting report of a functional problem unit in elementary arithmetic, Lindquist (18) told in the words of the fourth- and fifth-grade children how they manage the supply closet for the school by filling orders, making records and reports, and checking in new supplies. This seems to be a happy combination of instruction and administration.

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CHAPTER IV

Educational Costs and Their Analysis

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THE research on educational costs overlaps other phases of educational finance and business administration. In fact, most cost research is a means to an end—to secure more funds to meet costs. The revenue to meet costs is affected by economic cycles and national crises, but according to Thurston and Smith (61) the schools do not feel the upswing or the downswing of general prosperity until some time elapses and then in a modified degree. Therefore, one may expect to observe during the period for which the report is prepared some prewar, war, and postwar influences at work.

The Movement of Costs—Trends

Hubbard and Sease (29) and Fowlkes (24) studied expenditures of public schools over a seventy-year period and found the general upward trend interrupted only three times, 1870-74, 1930-34, and for the single school year 1942-43, the latter interruption being the only one during a war period. The upward trend was resumed in 1943-44 and continued into 1944-45. The Chamber of Commerce of the United States (62) presented textual and graphic material showing increased costs, particularly in states where urbanization has expanded and where income per capita is above the average. Reporting on advance statistics of state school systems *Education for Victory* (19) pointed out that costs have increased since the depression years of the thirties in spite of a decrease in the total number of children enrolled in the schools. The explanation advanced is that the number of high-school pupils continued to increase, the cost for such pupils being about 70 percent more than for elementary-school pupils. Vincent (63) summarizing the results of studies carried on by Mort and others over a period of a decade concluded that the kind, extent, and quality of educational opportunities available to pupils are directly related to the expenditure level of the schools. He did not imply that expenditure level is the only determinant of quality. The National Education Association (40) devoted one issue of its *Research Bulletin* to school expenditures in war and peace, noting that expenditures for public education were lower in 1942-43 than in any year since 1938-39. The chief cause for the decline for this particular year was an accumulative decline in expenditures for capital outlay which overbalanced the increase in current expenses. Teachers' salaries rose slightly but less than other wages.

With respect to costs of specific categories of expenditures, Soper (57) presented data on fixed charges for New York State over a period of twenty-three years showing that total fixed charges, the percent fixed charges were of current expenses, and pupil costs for fixed charges all

increased considerably during the period. The chief cause of the increase was payments for teacher retirement.

Pattington (50) traced the historical development of school transportation and presented some general data on its cost. His chief contribution, however, lies in the research he did on the cost of transportation in New York State, in which he undertook to analyze the factors affecting costs, such as size of buses, wages of drivers, equipment, storage versus school garages, insurance, cost of gasoline and oil, type of roads traveled, and amortization of cost of buses. He developed a formula for computing the probable cost of operation of a district-owned bus. Grieder (27) raised the issue of including in the school budget an appropriation for public relations in view of the increasing competition with other governmental agencies for public funds.

Comparative Costs

The following statement by Grieder (28) introduces a group of researches bearing on comparative costs: "No matter how much money were poured into schools in some communities, they could not be made to approximate in educational opportunities the schools of other communities." Woods (64) ranked the forty-eight states on (a) the need of education, (b) the ability to pay for education, (c) the respective efforts of the states to provide schools, and (d) the drawing and holding power of the high school, noting wide variations in each category. Students of state school administration would do well to study the detail of his technic and data. Givens (25) pointed out that school expenditures since 1933 have increased less rapidly than national income. In 1929, 2.8 percent of the national income was devoted to education; in 1944, only 1.5 percent. School expenditures have also lost ground in total tax collections. In 1929, 23 percent of all collections was spent for public education; in 1943, about 8 percent. He also made a comparison of expenditures for education and for certain so-called luxuries: 5.2 billions of dollars for alcoholic beverages, 2.4 billions for tobacco, 2.3 billions for education, 1.5 billions for beauty culture preparations and services. The Chamber of Commerce of the United States (62) reported that a higher level of educational expenditures was found in states with higher income brackets.

Two studies, one on a national and the other on a state basis, present much comparative data. From each of the original studies several articles have been written. The one on the state basis was under the direction of Mort, assisted by Burke, (39) for the New York State Educational Conference Board (42). The original mimeographed report is unique in many respects. Its purpose was to look at the schools from several vantage points and from data collected determine what effect local school expenditure has had on the educational program. Students of education and school officials will find the study illuminating in its procedures, sources of data, notes, and tabulations. Other states could well afford to adopt the methods used in any comprehensive study of educational funds and what they purchase

in the way of the school program. The study on the national basis is the Cooperative Study of Public School Expenditures directed by Norton (assisted by Lawler) for the American Council on Education, the National Education Association, the National Council of Chief State School Officers, the Southern States Work-Conference, and the United States Office of Education (2, 43, 48, 49). The report described shocking inequalities in the provision for education among the various states. States with least resources were making greater sacrifices than those with larger resources. The median expenditure per classroom unit varied from \$400 in Mississippi to \$4100 in New York. From the original two-volume mimeographed report data were drawn for a printed, graphic, and pictorial edition entitled "Unfinished Business in American Education" which if read and digested by school officials of the various states, should result soon in a concerted effort to erase the most glaring inequalities in our national educational picture.

Per Pupil Costs

Costs per pupil in average daily attendance have been increasing for many years. Fowlkes (24) showed that in 1880 the average expenditure per pupil for the country as a whole was \$7.91, rising steadily until in 1942 it was \$94.56. The National Education Association (31) reported the low per pupil cost by states in 1880 to be \$2.14 and the high \$29.80. By 1944 the lowest had risen to \$42.35 and the highest to \$198.49. Bagley (3) and Education for Victory (19), commenting on advance statistics released by the U. S. Office of Education, pointed out that pupil costs have continued to increase despite a decline in enrolments. The U. S. Office of Education report on pupil costs in city-school systems for 1943-44 (5) revealed that pupil costs for nearly all expenditure classifications were above those of the previous year in most of the cities. Pupil costs in cities from 1940-41 thru 1943-44 were studied and an increase in the arithmetic mean ranging from 6.2 to 44.4 percent, with an average of 16.8 percent was found. This average was below the 26.1 percent increase in the cost of living for the same period. Borchardt (6) pointed out the inequalities of educational opportunity evidenced by a per pupil expenditure ranging from \$34.60 in Mississippi to \$178.50 in New York. Vincent (63), using data of the New York State Education Conference Board report (42), showed that the proper expenditure per pupil in New York to maintain a good program averaged about \$115.

Building Costs

School building construction was halted during the war and has not been resumed to date. Considerable preparation has been made for postwar building construction which Thurston (59) reported would increase in volume for five years after resumption. The amount required to catch up in school plant construction was estimated to range from two and one-half

to nine billions of dollars (23, 59, 60). How to finance this outlay is of much concern. Cate (11), McClintic (34) and Thurston (59, 60) presented data to prove that school districts in general are in a more favorable financial position than they have been for years, because (a) indebtedness has been substantially reduced, (b) current and delinquent tax collections are above average, (c) cash on hand is large, (d) interest rates are low, and (e) state treasuries have piled up reserves. Essex (22) and Scherer (54) indicated that high costs may retard the resumption of normal building activity unless the states and the federal government participate in financing plant costs.

Higher Education

The foregoing analysis of costs dealt exclusively with public elementary and secondary education. Considerable research was also done in the field of higher education, both public and private. Russell (51) studied the trends in sources of support for higher institutions from 1880 to 1942 noting a hundredfold increase in income over the sixty-year period. He also directed the New York survey of higher education and reported at length on (a) financial resources devoted to higher education, (b) trends in the support of higher education, and (c) college costs to the student (53). Eckelberry (18) indicated that the war affected different institutions unequally, placing many in a serious condition because of high costs and decreased enrolments. Publicly controlled institutions expended 1.7 per cent more and privately controlled 1 per cent less in 1943-44 than in 1942-43. From 1930-44 index figures of expenditures rose from 100 to 149.

The method of computing instructional salary costs in a municipal university as reported by Baker (4) may be of interest to others wishing to make a similar study. Cain (9) and Davis (15) submitted facts on endowments and gifts showing that an all-time high for such support was reached in the early 1940's but that large philanthropies declined seriously. Earnings from endowments decreased materially due to lower rates of interest. Bond holdings declined rapidly until arrested in 1943 by large investments in government bonds.

Future financial problems of the higher institutions were studied by Alexander (1), Cowdry (13), Dozier (17), Moehlman (35), and Russell (52). Publicly supported institutions will fare better than those privately supported. Endowment earnings will continue downward; student fees will of necessity increase; more state and federal support will be required. Dozier proposed for private institutions a pre-enrolment-prepayment plan to create a backlog of students and funds.

Causes, Relationships, and Results

"If life begins at forty, education cannot dare stop at eighteen" (58) furnishes one reason why costs are higher. Adult education is rapidly becoming a part of the school program. In some states public-school funds are used for certain services to private school children (16). The cost of

living and the dollar value have changed; veterans education, feeding, and even housing school children, are part of the program (32). Davenport and Remmers (14) and Givens (25) presented data to show that education raises the level of production skill, increases human wants, which in turn demands more education. Conant (12) supported this viewpoint. If the goals outlined in the comprehensive report of the Research Division of the National Education Association (41) are to be achieved 100 percent, much larger school expenditures must be made. Boushall (8) proposed an educational use tax on employers in business and industry for the better support of education, his argument being that better education raises the standard of living and makes better business, thus enabling business to pay for better education.

Future Costs

No recent REVIEW cycle on finance has produced such a volume of future predictions and expectations as this one. Undoubtedly, the emphasis during the war on postwar planning stimulated this effort. The number of rejectees for the armed services on account of illiteracy focused attention on the inadequacy of education in some areas (33). All predictions point to higher costs. Johnston (30), Boushall (7), and Norton (44, 46) emphasized the fact that good education is good business and that it is good business to put more money into education. Education is essential for the necessary skills to maintain a high rate of production and full employment. Borchardt (6), Mort (38), and Norton (43, 45) presented data and argument that the cost of education will have to be increased considerably to erase glaring inequalities of educational opportunity both among the states and within each state. To raise every classroom unit to a \$1600 minimum alone would cost \$316,000,000.

The California Reconstruction and Reemployment Commission (10), Grace (26), Norton (47), and Thurston (61) saw the need for larger expenditures to take care of needed expansion of the educational program—nursery schools, adult education, post-secondary-school education, education of returning veterans and displaced workers. From a more philosophical viewpoint Mort (36, 38) and Smith (56) argued for good schools to shape the social pattern adequately and to undergird democracy. Education must be valued higher than in the past. Several authorities (29, 40, 55) estimated the probable annual cost of public elementary and secondary education as between 3.9 to 6 billion dollars in the postwar period, because of the unprecedented demand to catch up on plant construction, to increase teachers' salaries and to expand the program. Such expenditures would claim from 3 to 5 percent of a national income.

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CHAPTER V

Regulation of Credit to Boards of Education

WILLIAM P. McLURE

A DAY of accelerated building of schools and borrowing of money is ahead. Engelhardt (5) noted that the expansion of educational opportunities in this country is inevitable and imperative. The kind of community school needed is in the process of evolving, where school building use will not be limited to the traditional school hours. Mort (15) observed that the public may be ready to reevaluate the power of education in our national life and may come to think of a schoolhouse as contributing something more to education than mere shelter for the type of conventional school previously known. Thurston (25) reported that the public must be ready to pay considerably more than two and one-half billion dollars for school building during the period of restoration and elevation of school plant standards. Scherer (23) pointed out that the huge building program lying ahead is destined to share the limited supply of skilled labor and materials with other important projects. Heck (12) asserted recently that the time for planning is coming to an end and the time for constructing is approaching.

Present Practice of Financing School Building Programs

Flesher (7) noted that the sale of school bonds continued as the major method of financing school building programs. Grieder (9) and Flesher (7) pointed out that very little research had been done and very little had been written concerning school bonds since 1935. Grieder termed the issuance of bonds by local school districts as a poor method by which to finance capital costs. He indicated that adequate state building programs, in part financed by federal funds, could obviate this unenlightened procedure. According to Owen (20) and Oakes (19) the power of a board of education to borrow money for capital costs is acquired by legislative enactment, and the statutory provisions are strictly construed. Debt limitations imposed upon boards of education by statute are absolute and cannot be evaded by any lease and option device (20).

According to Chisholm (3) a large number of school districts in many states are now bonded heavily and cannot issue bonds within the limits of legal restrictions adequate to meet their school building needs. Rosenfield (22) found that recent court decisions were in conflict as to a school-board's authority to create local reserves for future building projects apart from specific statutes authorizing such practices. In a study of legal restrictions on financing capital outlay Peterson (21) found that districts in only a few states have been able to take advantage of their improved financial condition to set aside reserves from current income for building purposes. Lewis (13) pointed out that with heavy loads of debt service,

with shrinking assessments in cities, and with demands of operating costs, the limits of the property tax have been reached if not exceeded. This condition raises a question concerning the nature of our tax structure, and creates a need for greater state and federal assistance because of their pre-emption of the best and easiest sources of tax revenues. Essex (6) pointed out the low bond interest rates as one bright spot with respect to presentday building costs.

Trends in the Financing of Capital Costs

A review of the literature of recent years reveals a trend of thought toward financing capital outlay costs on a more scientific basis than the method of placing the burden upon the local school district.

Essex (6) reported in 1946 that thirteen states made some contributions to local school districts for school building construction, ranging from borrowing from state funds to making regular appropriations. Hamon (10) summarized important trends in this area of school finance as (a) discontinuance of financing plant programs by sinking fund bonds in most localities in favor of twenty-year serial-bond financing (short-term amortization will be even more essential if the apparent trend continues toward a less-permanent type of construction), (b) a pronounced trend toward substantial state aid for capital outlay, (c) earmarking of some reserve funds by state legislatures for special financial assistance to districts for the construction of state-approved school buildings during the early post-war period, and (d) an increasing sentiment thruout the nation for federal financial assistance for the construction of school facilities. Clapp (4) stated that a combination of local effort and outside funds on some equalization basis is needed. The American Council on Education, the National Education Association, and the American Association of School Administrators (1) stated that federal appropriations for school construction should be distributed according to two factors, (a) the proportion of the nation's educational load in each state, and (b) the relative fiscal capacity of the state.

Needed Research

Research in credit to boards of education is closely associated with the building needs and the functions buildings are to serve in the educational process. The literature on this subject during the past three years reflects widespread sentiment for research in the development of patterns of financing capital costs of current operation of schools. Fowlkes (8) suggested that the building needs of a community should be studied from ten to twenty-five years in advance of any given year. Swanson (24) emphasized the good which can come thru cooperative action of administrators, teachers, and laymen in evaluating the school facilities as a whole and planning future needs. Hamon (11) recognized the need of research for developing an objective formula for financing capital outlay and debt service upon an equalization basis. Burke (2) expressed the same need

cited by Hamon, but favored limiting the equalization basis, as has been done in New York, to satisfactory districts. Flesher (7) observed that the greatest need for research appeared to be in the areas of unit costs, the division of costs, and the interest costs of financing construction thru the sale of school bonds. Mulford (16, 17) emphasized the need for local research prior to a bond sale in the accumulation of invaluable information. In this connection he suggested a checklist of items for consideration. Peterson (21) noted that most states are desperately in need of legislation facilitating the establishment of the pay-as-you-build or the accumulate-in-advance policy, thus reducing the amount of long-term borrowing.

Morphet (14) reported the need of a plan for determining the cost of supporting a comprehensive program of education, rather than one phase of the program such as teachers' salaries. He suggested that consideration be given to the establishment of reasonable capital outlay reserves.

Norton (18) observed (a) the need for the states and localities to put into effect certain administrative and fiscal reforms which are essential to the effective financing of education, and (b) the uncertainty of the role of the federal government in the financing of education in the postwar period.

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CHAPTER VI

Relation of School District Reorganization to Finance and Business Administration

CALVIN GRIEDER

IN the last three years more interest was shown in district reorganization than during any previous comparable period. Noteworthy was the large number of investigations sponsored by state authorities, signifying a vastly increased and serious recognition of district organization as a state problem. Many reports of research at the state, county, and local levels adduced conclusive evidence on inequalities of financial resources, expenditures per pupil, and educational services. The inefficiency and wastefulness of current district administration were also indicated. Data on how reorganization could mitigate inequalities and promote efficiency and economy in the spending of school money were included in some reports in more or less detail, but generally speaking few studies showed what actually happens under reorganization. A need is apparent for more evaluative investigations like those of Cooper (12) and Cushman (13).

One more noteworthy trend besides the increased recognition of reorganization as a state problem was the growing interest in enlarged intermediate units. The best example is the progress report on the study of the intermediate unit in New York State (9), cited further below.

This chapter is limited to a review of studies which specifically dealt, at least in part, with district reorganization as it bears on finance and business administration.

General Studies

Both Morrison (37) and Elliott and Mosier (19) emphasized the need for not only more research in educational planning, but also the coordination of research by federal, state, and local agencies, including research on the allocation of control and support to the three levels of government. Rosenfield (47) showed by analysis of high court decisions that a state (subject only to its constitution) has supreme authority over education, with power to reorganize or abolish school districts and educational services in its discretion. This authority covers even a state's taking over assets of school districts without consent or compensation. Mort (40) pointed out, however, that while in legal theory district reorganization is part and parcel of state control of education, control and support are not necessarily inseparable. He argued for more careful thinking on the issues of control and support, in the light of all basic, relevant principles. Fowlkes (21) dwelt at length on the relationship of finance to local unit organization and control. He stated that a satisfactory plan of support must involve local, state, and federal participation, without stultifying local initiative.

While the problems of district reorganization, finance, and administra-

tion are largely problems of improving rural education, and most research during the period covered recognized them, specific attention was drawn to rural problems in several general studies. Butterworth (10), Dawson (14), and Norton (41) summarized the principles which should govern the organization and financing of rural education. Dawson also pointed out the inadequacies of three methods commonly used to mitigate the limitations of local district administration: (a) payment of tuition for high-school services, (b) transporting children from one district to another, and (c) superimposing high-school districts upon existing elementary-school districts. He cited earlier research of his which showed that costs are excessive in elementary and secondary schools with less than 200 and 210 enrolment respectively, and recommended larger units of administration for financial economy and improvement of regular and special services. Greene and Meadows (22) also declared that drastic reorganization of local units is demanded by, among other reasons, the excessive costs of regular and special services in small units, the complicated financial relations involved in tuition plans and overlapping districts, wasteful duplication of effort, and inadequacy of local resources.

Edwards (17) presented data showing that the rural population of the United States carries an educational load out of proportion to that carried by towns and cities, as measured by the ratio of children to adults. The situation is aggravated by the fact that farmers receive a disproportionately low share of the national income. He concluded that reorganization accompanied by both state and federal aid is essential for efficiency, economy, and equity in the education of rural children.

The remainder of this review reports the findings of statewide investigations and a few studies limited to county and local units.

County and Larger Intermediate Units Favored

Almost a dozen studies in as many different states favored the strengthening of county units of administration or larger units involving two or more counties or comparable areas. The Alabama Educational Survey Commission (49), while recommending no change in the principles of the 1935 minimum program law, stated that better use of school funds and better administration would result from unifying all districts within counties of less than 5000 population, and eventually adopting a county-unit system in the entire state. In the meantime districts should develop cooperative procedures for more effective and economical business and educational administration. The Arkansas Education Association (1), supporting its proposed initiated reorganization act, advocated reducing the state's 2179 districts to 388 by incorporating all districts with fewer than 350 enumerates into county rural districts. One of three specific advantages mentioned was more economical expenditure of school moneys. The Idaho Education Survey Commission (5) recommended reorganizing on a county or modified county basis to improve educational services and financial and administrative practices. Detailed proposals for a redefinition

and strengthening of the county superintendents' functions were made, particularly respecting business and financial administration and accounting. The Iowa School Code Commission (29) also recommended strengthening county administration.

The Kansas Legislative Council (30) sponsored statewide reorganization of the more than 7000 local units thru county committees, without, however, specifically recommending formation of county units. In Missouri (11) the enlargement of "school service areas" based on county studies was likewise urged. Englehart (20) and Vineyard (53) both set forth reorganization plans for individual counties in Missouri, whereby all local units would be united into county units. Holy (27) reported the goal of the Ohio School Survey Commission as the organization of eighty-eight county units thruout the state, excluding one hundred and thirteen city and eighty-eight village districts. County units were also recommended for South Dakota in one study made in that state (50).

A growing interest in administrative units larger than counties was manifested in a few investigations. A very detailed proposal by Butterworth (9) favored the creation of "intermediate units," to serve as operating units between the state and the local districts, with functions specifically assigned. The intermediate units, comprised of central, union, and common school districts grouped on a socio-economic basis, would provide educational, administrative, and business management services which cannot be effectively provided in the component districts. The report recommended a minimum enrolment of 5000 for such intermediate districts, subject to modification in some circumstances. In Virginia also an interest in units larger than counties was shown, in a proposal of the Virginia Education Commission (15) for combining counties into administrative units, with assistant divisional superintendents in charge of business affairs. Reusser and Wochner (46) leaned toward the county as the administrative unit in Wyoming, but also favored larger intermediate units of two or more counties with responsibility for certain functions.

County Unit Not Favored in Few Cases

A few investigators concluded that reorganization on the county basis would not be sound. The proposal for New York cited above (9) made it clear that a county unit was not recommended, altho some intermediate districts might be developed on such a base. The Kansas Legislative Council (30), while advocating reorganization thru county committees, did not specifically favor county units. Two reports categorically took the position that county units should not be formed or perpetuated. Booth (2), taking a view opposed to that expressed by the Idaho Education Survey Commission (5), concluded that the position of county superintendent was unnecessary in a reorganized state system and recommended that the position be abolished, the county recorder's office to be assigned responsibility for financial and statistical accounting, and the state education department to be assigned the supervisory functions. Kumlien (33, 34)

also differed from most students of the reorganization problem in favoring retention of local units.

Danger of Financial Policies' Freezing Undesirable Pattern of Organization

The danger of fixing on a state an unsatisfactory system of local administrative units was referred to in a number of reports. Morphet (36) warned that some state systems of financial aid in effect reward the continuance of inefficient local units as a result of failure to recognize state responsibility for assuring adequate educational standards. This danger was also noted by Norton and Lawler (42), who stated that reorganization of districts and decisions on educational services to be rendered should be solved before or concurrently with the financing plan. They held that each state must work out for itself the financial effects of reorganization, and presented illustrations for several states. Hamon (24) pointed out that a plant program geared to present local unit organization would freeze an inefficient, ineffective, and obsolete school system in many states for another generation.

Booth (2) reported that many local districts in Idaho require state subsidy in order to maintain even substandard schools, and that the state subsidy to poor districts provided by law in 1945 actually barred consolidation and perpetuated inefficient districts. The Idaho Education Survey Commission (5) frowned on allowing cooperative arrangements by basically unsatisfactory districts, a practice which retards realistic attack upon fundamentally unsound conditions. This view differs from Kumlien's position that local districts should be retained and encouraged to enter into cooperative arrangements for certain services (33, 34). The elimination of overlapping high-school and elementary districts was recommended for Kansas (32).

The Michigan Public Education Study Commission (18) reported that 95 percent of the state's 6274 districts were submarginal in character, and practically incapable of performing their functions as efficient and economical units of local government. It reported that little effort has been made to improve conditions by district reorganization, despite a relatively high level of state support, with its implication of some degree of state control. Capps (11) also found that in Missouri the law of 1931 granting aid to guarantee an eight-month school term has actually frozen local districts, and that since 1931 there has been a cessation of consolidation. The law, intended to help consolidation by providing grants of \$1000 for each abandoned school, defeated its purpose because the grant was too small and the guarantee too generous. Butterworth (9) also concluded that state aid to central school districts in New York was too small, and that the limitation of \$30,000 for any one school district included in any central district, imposed in 1943, has discouraged consolidation.

In both Illinois and Wisconsin investigators discovered that prevailing

state aid plans operated to favor retention of certain low-tax areas. Weaver (54) reported that transportation aid in Illinois without consolidation of administrative units created low-tax areas with a vested interest in preserving local districts. The Wisconsin State Education Department (55) found that districts with suspended schools and few children enjoyed a marked financial advantage over districts operating schools. The former had an average levy of 1.5 mills, while comparable operating districts had an average levy of 5.7 mills. A plan of state aid that would result in doing away with financial disadvantages for any considerable group was recommended.

Incentives to Reorganization

It is evident that many investigators in the field of district reorganization place high value on the effect of financial incentives held out by states for the attainment of improved administrative organization. For California (43) a proposal was made to include in the state aid program three types of incentives: (a) an average of \$9 more per pupil in districts with ninety-five or more pupils in average daily attendance, (b) transportation aid, and (c) aid for capital outlay. Booth (2) recommended for Idaho that reorganization of districts on fiscally and educationally sound bases be required as a prerequisite to receiving state aid, the state to be absolved from granting aid to districts not meeting standards adopted. In Kansas, a 1944 report of the legislative council (30) advocated that schools with fewer than ten pupils should not receive aid, except in isolated districts. A progress report on reorganization in that state issued in 1946 (31) stated that one of the most influential factors assisting in the reduction of one-teacher schools by 18 percent was the reducing of grants to schools of ten or fewer pupils and the augmenting of grants to larger schools.

Grants for school plant construction and transportation were frequently mentioned types of incentives in the period covered by this review. Bursch (8) cited twelve reasons for the gap between the known, necessary, and desirable school plant provisions and what is actually provided. Most of the weaknesses, he declared, are associated with archaic statutes on districting and finance. He advocated extension of state and federal support and equalization plans to include school plant construction for districts organized on approved bases. Breckner (4) reported that satisfactory district organization as a prerequisite to approval for state grants for building construction had been effective in Washington. Weaver (54) held that transportation aid would have to be substantial to induce consolidation in Illinois, and proposed that along with such aid building grants should be guaranteed where reorganization necessitated new construction. School districts should be required to meet part of the costs from a low, uniform levy, supplemented by state grants to guarantee between \$300 and \$400 per pupil for construction (based on 1939-40 cost data). The Illinois Education Association (28) reached two conclusions relative to the bearing of aid for transportation on reorganization: (a) transportation aid would

need to be increased to encourage reorganization; (b) financially weak districts would need to be guarded against heavy costs for transportation resulting from reorganization unaccompanied by aid for transportation.

Capps (11), noting the slow progress in reorganization in Missouri, recommended aid for buildings and equipment, offered by the state to satisfactory units. Transportation aid was recommended upon approval by the state education department of bus routes. Aid to enlarged districts in New York for buildings and transportation was recommended by both Butterworth (9) and Burke (7), the former proposing allocations to the proposed new-type intermediate districts. Building aid of 25 percent was urged by the Virginia Education Commission (15) to encourage the development of larger centers.

Economy and Efficiency Related to District Reorganization

The number of studies reporting in general terms on the economy and efficiency of larger administrative units was greater than the number reporting specific data on financial advantages. General treatments of financial advantages were presented in studies made in Arkansas (1), California (38, 39), Colorado (23), Illinois (28, 51), Kansas (32), Massachusetts (25), Michigan (18), Nebraska (3), Ohio (27), South Dakota (50), and Wisconsin (45). Hill (26) wrote on the economies of reorganizing city school districts. Most of the advantages mentioned related to savings effected by larger pupil-teacher ratios, large-scale buying, elimination of duplication of school facilities and transportation services, reduction of general control costs, and reduction of the cost of special services deemed essential for satisfactory schools.

Specific estimates or reports of financial economies were reported in several studies, with the qualification in some cases that the data applied only to current expenditures. Capital outlay needs created by reorganization of districts and attendance centers would in some cases require more money than could be saved by reorganization.

Butterworth (9) found that the cost of needed additional services in proposed intermediate units in New York is in inverse ratio to size of unit, ranging from \$22 per pupil in the largest units to \$48.50 in units of 1000 pupils. He recommended 5000 as a desirable minimum enrolment. In two detailed studies of larger proposed intermediate units, savings of 20 percent each were estimated for transportation, teaching costs, and purchasing. Other savings were indicated for insurance and tax collection. Burke (7) found that the point of greatest economy in New York schools was reached when elementary schools had about 400 pupils and secondary schools about 500. Breckner (4) reported that in the reorganization program of Washington wiser expenditure of funds was brought about by elimination of (a) small schools with low pupil-teacher ratio, (b) duplication of transportation routes, and (c) state subsidies to "minimum attendance districts" with fewer than fourteen pupils in average daily attendance (the last exceeding \$100,000 per year). In one county total costs were reduced

by 8 percent, while teachers' salaries were increased 14 percent. Costs other than transportation and salaries were reduced more than 50 percent. In a regional study of three counties in the Columbia Basin in the same state, Bunsa and Stonecipher (6) estimated that reorganizing the seventy-two existing districts into eighteen administrative units would effect a saving of 20 percent and simplify and reduce financial administration. In Wisconsin (55) it was estimated that a net saving from closing 1316 schools with less than twenty-two average daily attendance would have saved \$1,447,600 in 1943-44, allowing for transportation and other items associated with closing the schools.

Snyder (52) found that in one West Virginia county five years after the adoption of the county-unit plan the total outlay and per capita costs were about the same as before, but that the educational program was better than before in all aspects evaluated. Two county studies made in Missouri (20, 53) reported estimated savings of 5 percent and 10 percent in current expenditures. In the first case the reorganization of fifty districts into one administrative unit with ten attendance centers was proposed; in the other case, it was proposed to reorganize 117 districts into one unit with eleven centers.

Rural-Urban Problems of Reorganization and Finance

Besides Edwards (17) several other investigators were concerned about the distressing conditions of rural areas with respect to school finance. Butterworth (9) reported that in New York the centralized districts possess only 67 percent as much taxing power as city districts, and only 56 percent as much as village districts. Common school districts were believed to have even more meager resources. At the same time the rural areas have, as also pointed out by Edwards, a larger load of educands than city districts have. Weaver (54) demonstrated that in Illinois assessment ratios in rural areas are generally higher than in urban areas. He concluded that in enlarged districts containing both rural and urban property, tax levies apportioned on the basis of full rather than assessed valuation would relieve rural people from bearing more than their fair share of the burden of school costs. He recommended appraisal and equalization of valuations by the state tax commission in preference to county boards of review.

Lancelot (35) in a detailed study of consolidated districts in Iowa which include both farm and non-farm property found that the former pays in school taxes three times as much per pupil as the latter. He believed this fact to be the chief obstacle to reorganization in Iowa, and suggested two possible solutions: (a) differential tax rates, so that farm and non-farm property would yield the same amount per pupil (a proposal which he admitted was quite questionable); (b) a new type of district for school administration in which component farm and non-farm subdistricts would retain their identity for taxing purposes. Taking cognizance of the same problem, the Iowa School Code Commission (29) proposed a state fund to be apportioned as a credit against taxes on agricultural lands in dis-

tricts where the school tax exceeded fifteen mills. Kumlien (33, 34), working on the same problem in South Dakota, advocated retention of local units for taxing purposes, these units then to contract with larger centers for tuition and transportation.

The Kansas Legislative Council (30) brought out the fact that many urban districts are in as great financial distress as rural units, and in some cases in worse distress. This was also pointed out by the Wisconsin State Education Department (55), which reported that in 1944-45 there were 885 districts with suspended schools still finding it advantageous to retain legal status, nearly 100 of them with an average of less than one child per district. Data for Illinois (54) and Michigan (18) also proved that many rural districts find it advantageous under present laws to retain their independent status. Capps (11) reported that in Missouri 1662 rural schools were closed in 1944-45, or 31 percent of the total number in the state. Even with the duplication and inefficiency of their bus routes and other services, they could still operate at only about 68 percent of the average cost of remaining open. Bragg (3) in his investigation in four Nebraska counties concluded that the village districts bore an unfair share of the burden of education in their areas, compared with the rural districts.

Major Obstacles to Reorganization Related to Finance

Six kinds of obstacles related to school finance were reported by various investigators as barriers to reorganization. The obstacles are: (a) disposition of outstanding debt; (b) the threat of higher costs for new services and schoolhouses; (c) increased complexity and expense of transportation services as size of district is increased; (d) different assessment ratios of farm and urban property; (e) high valuation of individual local units within a proposed reorganization project; and (f) insufficient financial incentives held out by state governments. Studies dealing with one or more of these retarding factors were reported by Booth (2), Butterworth (9), Donnelly (16), Grieder (23), Kumlien (33, 34), Lancelot (35), the Michigan Public Education Study Commission (18), Weaver (54), and the Wisconsin State Education Department (55).

Only two studies of the many examined for this review lacked attention to district reorganization as an important factor in the improvement of school finance and administration. Ross' study of factors associated with Kentucky's educational level (48) is unusual for its lack of reference to district organization as one determinant of a state's educational status. The other report was issued by the Committee on Rural Community High Schools of Wisconsin (44), which included reference to many ways of improvement that were studied, tried, and recommended in a three-year program (1940-43), but gave little attention to reorganization. Two years later, however (1946), the Committee issued a final report (45) in which the deficiencies of rural elementary and secondary education were declared associated with inadequacies of district organization, financial inadequacy bringing in its train many other weaknesses.

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CHAPTER VII

The Financial Aspects of Public-School Transportation

JAMES CAMPBELL

MUCH of the research in school transportation for the period covered in this report constitutes a recognition of the fact that school transportation is big business. An annual survey (2) in 1944 showed more children transported to and from school; fewer buses available; and longer routes, calling for greater mileage from each bus. The same source pointed out that these trends became apparent in a similar survey in 1943. As would be expected, the increased mileage resulted in a corresponding increase in cost. National figures (2, 3) show increases as high as \$10,000,000. The latest survey (3) revealed that more than 4,500,000 children were transported daily in some 92,000 vehicles at an annual cost of \$93,297,146. Miles of one-way route increased over the previous year by more than 175,000. An analysis of costs for thirteen states reporting indicated that costs for the school year 1945-46 can be expected to increase by at least 8 percent. Smaller schools (1, 6, 7, 9, 11) with less wealth per pupil than others are finding it difficult to provide transportation facilities. To correct a similar situation, a statewide study (9) of pupil transportation is now underway in Indiana to evolve a plan for the improvement of the state's financing and administration of public transportation. Interviews (1) with school officials in more than thirty counties in Idaho revealed that transportation could not be provided because of insufficient funds. The South Dakota survey (11) concluded that the problem of transportation needed further study.

State Financial Provisions

Recent enactments by state legislatures imply that the expense of transporting pupils should be included in computing the cost of the school program. Covert (5) made a survey to determine the various state provisions in providing for pupil transportation. He designed questionnaires to (a) collect information on state plans for financing this activity, and (b) formulate criteria for evaluating state programs. Returns from state departments of education showed twenty-five states authorized the use of state funds. In eleven states, transportation expense may be included in the school program; twelve states do not provide for the use of such funds. One section of the report presented a summary statement for each state showing responsibilities placed upon the state, upon the counties, and upon local districts. Authorizations were listed for pupil transportation in the order of their frequency of occurrence in state laws. The same author also proposed a list of questions that should be considered when revised plans are made for financing pupil transportation. The Michigan survey (6)

inferred that state aid for transportation contributed to the general holding power of the school; a transportation formula for state aid, developed from statistical data collected over a period of years, had encouraged economies. An analysis of county transportation costs in Idaho (1) revealed that (a) the minimum program allotment provided only one-third of the cost thruout the state and (b) in some sections the transportation allotment exceeded 50 percent of the actual cost while in others it amounted to less than 10 percent. One of the recommendations of this survey was that the state should assume full responsibility for seeing that all transportation costs up to an approved amount are met.

Ownership

The trend toward school ownership of buses, as a factor in reduced costs, is still apparent. Hutchins (8), using records made available by the ODT, reported that 80 percent of approved applications for buses were presented by school authorities and less than 20 percent by contractors. He concluded the proportion of school-owned buses may average 60 percent in 1945. However, the picture is not the same for each state. A survey in Idaho (1) revealed 51 percent of the buses were privately owned and 49 percent publicly owned. Further investigation showed that several school-owned bus systems had lower costs than counties having contract service. This source admitted there are other factors affecting costs. Of the buses used in Michigan in 1941 (6), 90 percent were owned by school districts. In South Dakota (11), higher costs were found for transportation carried on by private conveyance in the common school districts. The same source concluded that expenses would be reduced if bus transportation was extended into community school centers of the state. Hutchins (8) reminded us that research has led to the conclusion that the cost of pupil transportation in school-owned equipment is about 40 percent lower than in contracted buses. New York State surveys (10) indicated the cost of private-contract buses was 1.47 times the cost of district-owned buses.

Insurance

Strayer (12), in a West Virginia survey, revealed that during the preceding five years approximately three dollars was paid in premiums for every dollar of claims paid. Data from a questionnaire showed forty-seven counties paid \$26,722 for insurance premiums while \$8455 was returned in insurance claims. Thirty-nine counties reported claims during the prewar year 1940-41 amounted to 21 percent of premiums collected. Other findings revealed that some counties secured reduced rates thru competitive bidding and others secured reduced rates by having sufficient buses to get fleet rates. Two of the recommendations of the West Virginia survey were that the state adopt (a) a standard policy for school buses, and (b) uniform practices with regard to types and amounts of insurance to be carried. Pattington (10), reviewing insurance rates, reported that most insurance companies allowed a lower premium rate for bus fleets consisting of over

five buses, and that in general ten-twelfths of the annual premium may be secured for the ten months the school is operated. He advised school officials to read all policies carefully. One of the recommendations of the survey in Idaho (1) was that a study be made to determine whether the rates were too high.

Purchasing

There is a general need existing over the entire country for new buses to replace those now in service. A recent census (3) indicated that more than 12 percent of all school vehicles are slated for immediate replacement. Apparently there is a need for greater economy to be exercised in the purchasing of buses and transportation supplies. Strayer (12) found that prices for new vehicles of the same pupil capacity varied as much as \$2000, and vehicles of identical size as much as \$300. He called attention to various state purchasing programs which secured school buses at substantial savings. A survey (4) based on state reports submitted by a group of central rural districts in New York State showed that 50 percent purchased transportation supplies at prices higher than those provided in state contracts. In Idaho (1) individual school districts purchased their equipment from local dealers; in Michigan (6) an allowance for depreciation of school buses over a five-year period stimulated school districts to purchase their own equipment.

Salaries

Pattington (10) found a wide range in the amount of drivers' wages, ranging from \$550 to \$1200. In New York State the average advanced from \$650 per year in prewar days to the present wage of \$750. He concluded that the size of bus and the route apparently did not affect the salaries paid. Strayer (12) pointed out that the average school bus driver in West Virginia is paid \$100 to \$125 a month; school bus mechanics \$20 to \$30 more each month than the bus drivers. Results of a questionnaire on drivers' salaries in Idaho (1) showed the following median salaries: Class A districts, \$64 per month; independent districts, \$65; common districts, \$72; rural high districts, \$68.

Costs

Pattington (10) worked out a formula for estimating the cost of operating a school bus fleet. The cost is determined by allowing \$135 as a fixed item for each bus, plus \$20 times the number of seats, plus \$20 times the daily mileage of the bus. After checking the formula against figures obtained from the operation data of fifty-eight buses, he found a difference of 2 percent between the estimated cost and the actual cost. For a fleet composed of various sizes, or middle-sized buses, he concluded that the formula produced a suitable result for quickly estimating costs of operation. The same author presented a table of bus costs which were determined on the basis of the average bus built to last ten years, and

from results obtained by checking over 7000 transportation setups. He also gave a sampling of cost items based on various sized fleets with varying mileage in consolidated school districts. Much of the non-research type of literature reviewed implied that as a result of preventive maintenance during the war, buses gave safer and more dependable service for a longer period of years. Strayer (12) reported that by using ten years instead of eight years as the average life of the bus in West Virginia, the difference in annual cost would be approximately \$93,000.

Possible Economies

Strayer (12) called attention to the success of high-school students as bus drivers in North Carolina and California, and suggested that if 600, or one-half of the West Virginia drivers, were high-school pupils employed on a part-time basis for as much as \$20 per month, a saving of \$432,000 could be effected. Questionnaires sent to the schools in Idaho (1) revealed that of the schools reporting, 16 percent of all drivers were high-school pupils. North Dakota (2) worked out a "Family System" of transportation, under which nearly two-thirds of its transported pupils were carried at an average annual cost of \$24. The annual cost per child carried in buses was \$45. Pattington (10) suggested using smaller vehicles on feeder routes to ease the strain on larger buses and thus provide greater economy. Smith and Beebe (4) reporting for the Intermediate District Study in New York State, estimated that a saving of 20 percent of present transportation costs could be effected. This estimate was based on a proposed plans of transportation worked out for three areas. The same source suggested the advisability of reorganizing the transportation routes of several districts into a single unified system and pointed out that economies could result from large scale buying and servicing of a large number of buses by one organization. A county reviewing committee (1) was recommended for Idaho. Responsibilities would be to approve bus routes, determine reasonable transportation costs, make allowances for board and room in lieu of transportation, and allocate funds to county or local districts for operation and maintenance of buses.

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CHAPTER VIII

Principles of Business Administration Applied to Personnel and Other Activities

HARRY P. SMITH and JOHN B. BOUCHARD

GEE (12) recommended, after an exhaustive study of the schoolboard clerk in Ohio, the unit type of organization with the superintendent, the chief executive officer, to whom all others are subordinate. Herlinger (15) insisted that the treasurer, as custodian of funds, should be responsible directly to the board, but only in his custodial capacity. Thompson (51) asserted that 84 percent of school custodians are appointed by, and responsible to the local board, thus implying lack of unified administration in this area.

Principles of Personnel Management

Spalding (49) discussed the organization of school personnel in terms of three major problems and then enunciated twenty-eight basic principles involved in the administration of personnel. The Michigan Public Education Commission (10), following an exhaustive study of non-teaching personnel, recommended strongly that local boards of education adopt specific personnel policies which they should reduce to written statements. Hill (16) called attention to the change in personnel policies, and outlined an eight-point plan of personnel management which would include a careful description of each job before making appointments. The American Association of School Administrators (3) set forth five principles in dealing with employees of all types. Mattier (27) described the advisory committee of classified employees on which each group had representation. Landry (26) cited a series of basic principles relative to the organization and administration of clerical services in school systems. Akerly (1) listed a series of policies which are desirable particularly during a war period when substandard help is employed. Hynds (21) analyzed management as planning, preparation, and action, and mentioned three functions, namely, policies, procedures, and standards of performance. Elsewhere, Hynds (20) showed how the skills of the personnel engaged in plant operation and maintenance can be utilized in checking plans and specifications and in training programs. He also described a research division in plant operation and maintenance which is concerned with the solution of problems in those areas.

Types of Personnel and Duties

The National Education Association, Research Division (31) listed several types of non-teaching personnel, and the Michigan Public Education Study Commission (10) classified them into three groups—custodial, clerical, and miscellaneous—but there is still lacking a comprehensive list.

Kaiser (24) described the University of California classification and compensation plan for over 1000 non-academic positions in which 141 distinct and easily recognizable kinds of work were identified.

Custodial Group

Phay (44) studied the status of school custodial employees in sixty-four cities above 100,000 and in 181 cities between 30,000 and 100,000. He included salary schedules, working groups, hours of work, labor affiliations, and retirement. He found that 70 percent of larger cities had labor organizations, some of which had a closed shop policy. Hynds (21) argued that the qualifications, duties, management functions, and technics project school building service into the professional class. Rich (45) inventoried the personal and technical qualifications of a good janitor and gave a partial inventory of janitorial service.

Pattington (41) gave a formula for determining the number of custodians for small schools based on five factors: number of rooms, number of teachers, number of pupils, square footage of plant, and acreage in grounds. Carson (4) suggested the room equivalent as the unit of measurement. He set up room equivalents for twelve categories of activities in plant operation. Smith (48) described the method of determining the manpower requirements for the custodial care of the buildings and grounds of a large city system. Huggett (19) discussed custodial service in schools of 200 to 1000 pupils. Thompson (51) cited the trend toward more objective units of measurement of custodial work.

Hayes (14) gave five benefits from inservice training of custodians which he grouped into three categories: apprenticeship training, home study courses, and janitor-engineer courses offered by colleges and universities. Thompson (51) called attention to the trend toward inservice training which is fostered by states and by local communities in increasing numbers since its inauguration by Minneapolis. Mention was also made of the sparsity of literature in this area. The work load of many custodians was excessive in terms of hours per week and types of duties frequently required, and the equipment and methods of work have not been modernized. Phay (44) found the model work week forty-four hours.

The Michigan Public Study Commission (10) reported the average schooling of men custodians slightly above eight years with that of women two years more; the average age of men 55.16 years and of women 38.68. Not more than 12 percent had had any specific training for custodial work and that consisted of the short courses offered for custodians. Pattington (42) found that 80 percent of school custodians have had only elementary-school training and but 50 percent any technical training. Clifford (5) reported a study of some custodial employees in Michigan.

Clerical Group

Smallenburg (47) collected information concerning school clerks from thirty-three western cities ranging in population from 4000 to more than

100,000. He established standards for the number needed based on type of school and registration. Garretson and others (11) summarized the results of a questionnaire on desirable qualifications sent to school administrators in all cities of 10,000 and above. Twenty-five different traits were mentioned as desirable, together with specific training necessary and courses of study needed. Nowrey (39) pointed out the traits necessary for contacting the public properly. The Michigan Public Education Study Commission (10) reported the average schooling of school clerical workers a little in excess of twelve years and their average tenure of service relatively short.

Other Employees

Herlinger (15) studied the status, legal and otherwise, of the school treasurer in certain Pennsylvania school districts under 30,000. He determined by the jury method their proper duties and functions. Gee (12) studied intensively more than 200 schoolboard clerks in Ohio, touching their legal status, personal and social characteristics, organization of office, and their own opinions concerning office and duties. He recommended professionalization of the office with increased salary and tenure. Cromwell (8) analyzed for 301 school systems the preparation and status of school nurses.

Inservice Training

Stoy (50) traced the development of schools for custodians and summarized the types of training in such schools now operating in many states. Winkle and Parker (53) described the Kansas schools for such workers originating at the Pittsburg State Teachers College in 1927. The work, based on sixty-five jobs, was organized into definite courses. McCullough (28) described the Connecticut schools operated for custodial employees by the State Department of Education. The program had been extended to attendance officers and census enumerators in the schools, and to some other state employees. Hayes (14) stressed the practical nature of the inservice custodial courses and the economies resulting. Kersey (25) mentioned the inservice courses for certificated and classified employees as part of the wartime emphasis of the Los Angeles schools. Holubowicz (17) described the Milwaukee Engineer-Janitor's School which had been in operation five years with increased efficiency and economy. Metcalfe (29) described the use of visual material in training custodial and maintenance personnel and listed available materials. The American Automobile Association and the Trade and Industrial Service of the Vocational Division of the U. S. Office of Education (52) outlined in great detail a training course for school bus drivers.

Salaries

Murray and Thomas (30) criticized the Bureau of Labor Statistics' cost of living index as totally inadequate and established a new index based on

procedures approved by mathematicians at Columbia University and the Massachusetts Institute of Technology. As of the date of the report, they reported an increase of about 43.5 percent in living costs, with food costs up 71.9 percent; clothing, 76.8 percent; house furnishings, 63.5 percent; rents, 15 percent; fuel, electricity, and gas, 14.8 percent; and miscellaneous costs, 22.8 percent. The Research Division of the National Education Association (31, 35, 36) reported the salaries in communities from 2500 and over, paid to teachers and groups of non-teaching personnel, including nurses, attendance officers, secretaries, clerks, and custodians and others. Salary changes over a period of years were given for each group. This was supplemented by special tabulations for eighty-one cities over 100,000, and 190 cities of 30,000 to 100,000 (32, 33, 34).

Tenure and Retirement

O'Keefe (40) pointed out lack of provisions generally for retirement of non-teaching personnel, and indicated that only a few states have such provisions. He estimated that only 20 percent of non-teaching personnel was covered. Phay (44) reported only 25 percent of cities he studied as having retirement systems for custodial employees to which they contribute one-half the payments. Altmeyer (2) argued for the extension of the federal social security benefits to school employees, thus making it possible for those changing to or from school jobs to benefit. Clifford (6) discussed the advantages and disadvantages of the extension of these benefits to school employees.

Crawford (7) stressed the responsibility of administrators for securing reasonable security for teachers and other employees and listed the benefits accruing from a feeling of security.

Insurance

Joyner (22) outlined the type of analysis to be made of insurance companies by boards of education prior to the placing of insurance. He also indicated how insurance should be allocated among agents and set up eligibility requirements for their participation. Pattington (43) listed the common types of insurance needed and gave factors to be considered by a board in planning its insurance program. Holy (18) showed the ratio of losses sustained to premiums paid and concluded that commercial rates should be lowered, and also that consideration should be given to some form of state or local insurance for public-school property. He named several large cities carrying their own losses.

Joyner (23) traced the historical development of fidelity bonding, stressed the need for this type over personal bonding, and mentioned six types. On the basis of court decisions, he deduced a series of general principles applicable to this type of bonding.

Neverman (37) gave data on injuries to Wisconsin high-school athletes and described the athletic accident benefit plan in that state. In a later publication (38) the same author gave the experience of the plan and

described its extension to all public-school pupils in the state while in school except while being transported. Elicker (9) described a plan operative in the New England states for the benefit of high-school pupils incurring injuries in athletics. Grubbs (13) described the plan in operation in a community in which the local physicians, dentists, and hospitals cooperate.

Real Estate Management

Rosenfield (46) reported a series of court decisions involving the reversion clauses of deeds conveying land to school districts for school purposes and stressed the need of careful examination of school deeds.

Needed Research

There is evidence of increasing interest in, and concern for, the non-teaching personnel; but far too little is known about the qualifications, personal and technical, for the non-teaching jobs. The University of California Study (24) is indicative of the type of research needed. What are the jobs? What duties and activities does each involve? What personal qualifications are necessary? What technical preparation is necessary? What inservice training programs are desirable? What compensation is required to secure and hold competent persons? Tenure and financial security are essential for the non-teaching as well as for the teaching personnel and should be studied intensively. Finally, personnel policies are imperative in this area and should be formulated on the basis of extensive research.

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CHAPTER IX

The Direction of Movement in Finance and Business Administration

WAYNE W. SOPER

As was noted in Chapter I, school finance seems to be coming of age. While one might expect, in view of this more mature status, that research in educational finance will have improved markedly as time has passed, this change is not clearly observable. There is still much immature effort. Researches too frequently are poorly planned, hastily performed, and incorrectly interpreted.

As was true in the previous three-year period (1941-44), financial planning has occupied the major energies of administrators and researchers. Shortages of materials have prevented the revival of school building construction without which many other educational developments cannot become effective.

Financial Planning and Support of Education

Evidence of the gross inequalities in the financial support of education keeps accumulating and the correlative necessity for equalization of educational opportunity thru state and federal support has continued to accumulate. The base of application of state and federal support is widening to include not only elementary and secondary education but nursery schooling at one end and higher education at the other. The bogey of federal control still haunts the minds of some writers.

An important outcome of at least one study was a discovery of the narrowing of the gap between cost of elementary and high-school education. This was due to two trends: (a) increased high-school enrolments and (b) a movement toward the single salary scale.

The battle for free schools was supposed to have been won in the previous century, but studies showed that textbooks and school supplies are charged to pupils in some localities and even fees are charged for certain courses.

To raise additional funds for educational purposes, new tax sources are being tapped and certain state tax sources—income tax, corporation tax, tobacco tax—are spreading. The trend of supplying state aid from the general funds of the states continues. Evidence continues to accumulate to the effect that good schools cost much money and that the best schools expend the most per child. The question of state and federal aid to private and parochial schools is still unanswered to the satisfaction of all parties.

Budgeting and Accounting

Budgeting in public schools is still groping for solutions to its many problems. Theory is far ahead of practice. The fault may be in piecemeal, sporadic research, the cure for which would involve surveys of a statewide

or nationwide nature. Some difficulty may be caused by lack of agreement on definitions. A budget is one thing to the theorist, another to the administrator. Research may find the answer but research must wait for better training of fiscal officers to practice what the best procedure preaches. Further study of the technics used in estimating the cost of supplies, equipment, and non-instructional services is needed.

In the field of accounting, reporting, and supply service a few new problems were touched upon. Registration of students for employment was deemed essential in a well-planned accounting program. Employee compensation records would provide necessary data for income tax returns as well as for accurate payroll accounting. It was proposed that students have a part in managing student activity funds. Further research in this field is indicated to establish sound policies, workable procedures, and accurate accounting.

The research on reporting centered attention on the methods of acquainting the public with the schools' activities, suggesting different types of reports for different purposes: (a) preliminary releases, (b) popular editions of bulletins, (c) special studies of immediate interest, (d) basic reports for reference and further research.

Costs of Public Education

Except for the school year 1942-43 total expenditures for public elementary and secondary education continued their upward trend in spite of decreased enrolments. The chief cause of the 1942-43 decline was the cumulative effect of lower capital outlay costs during the war years overbalancing the increase in current expenses. From a comparative viewpoint school costs lagged further behind national income and total tax collections than for a decade. Pupil costs in average daily attendance were still increasing due largely to a decline in average daily attendance. Considerable research was reported on the costs of higher education, both public and private, revealing higher costs, most of which fell on students in the shape of tuition increases.

Why are costs higher? The answer is multiple: expanded services, such as adult education, transportation of pupils, feeding of school children: lower dollar values; higher salaries for personnel, both teaching and non-teaching. Will costs decrease? The answer is no; all predictions point to higher costs. Some writers have stated that it is good business to put more money into education; that education is essential to maintain a high rate of production and full employment. Further expansion of school services is predicted: more nursery schools, adult education, post-secondary education, education of veterans and displaced workers.

Capital Outlays and Regulation of Credit

Regulation of credit to boards of education is confined almost exclusively to school building financing. This credit must be expanded in the near future to take up the slack occasioned by wartime cessation of building.

Planning must soon give way to construction. Until state and federal funds are available for a continuous school building program the issuance of bonds will constitute the chief source of funds for capital costs. Sinking fund bonds are giving way to twenty-year and thirty-year serial bonds amortized as to principal and interest. Further research is needed in the financing of capital outlay on the equalization principle to offset present heavy debt load, tax limitation, and mounting current costs. In addition, research to bolster legislation facilitating pay-as-you-go programs is badly needed.

School District Reorganization

Research in the field of school district reorganization has increased both in amount and in quality. Chief impetus was the impelling necessity to secure efficiency of administration to equalize financial load and to provide better educational services at no greater cost. The rural school district was given much careful study. A distinct feature of the research of the period was the increased emphasis on the enlarged intermediate unit.

In no fewer than fifteen states surveys of statewide scope were undertaken to establish facts upon which to erect a different school district organization, the chief objectives being the elimination of small, inefficient, costly rural districts and the creating of more effective units.

Concern was expressed over the danger of perpetuating undesirable patterns of organization thru stop gap, financial plans. To offset such possibilities, incentives to better reorganization were proposed in several researches. There still remain, however, some major handicaps to reorganization, most of them financial—(a) disposition of outstanding debt, (b) higher costs for new services, (c) transportation, (d) insufficient state aid. Reorganization has yet a major problem of joining the hands of local, state, and federal agencies into a unified, coordinated program of research and action.

Public-School Transportation

Public-school transportation has become big business. Buses carry millions of children daily and cost millions of dollars annually. Costs are increasing because more children are transported and because of the increased cost of equipment and higher wages of drivers. An increasing number of states are including transportation as part of the basic state aid program. The trend is toward school ownership of buses. However, the evidence is not conclusive that school-owned buses do provide cheaper transportation. Insurance on buses is relatively high for the amount of claims paid. Further research is called for in this new field. Some research indicated that savings may be made in the purchase of buses thru a state-wide purchasing agency. Again more research is needed to establish this fact. Student drivers are used in certain states to reduce costs. Are they as good drivers as older persons? Do they meet all requirements of the

liability laws in case of accident? Do they maintain good discipline of pupils on the bus? Someone should get the facts.

Personnel Activities and Related Problems

Research in the area of principles of business administration applied to personnel and other activities presented evidence of increasing interest in the non-teaching personnel, the heretofore forgotten school employee. Too little reliable factual data have been accumulated about the qualifications, personal and technical, for non-teaching jobs. What technical preparation is necessary, what inservice training is desirable, and what compensation and tenure are reasonable? Some researches sought to establish the line of responsibility of certain personnel, whether to the superintendent of schools or to the board of education. One study developed a formula for determining the number of custodians needed under given conditions. Research in the field of tenure and retirement provisions for non-teaching personnel moved at a snail's pace.

Index to Volume XVII, No. 2, April 1947

Page citations are made to single pages; these are often the beginning of a chapter, section, or running discussion dealing with the topic.

- Ability to support education, measures, 138
- Accounting, 190; financial, 147; internal, 147
- Assessment practices, 138
- Auditing, 148
- Bonded debt, status, 163
- Bonds, 163
- Budgeting, 143, 190; administration, 144; budget reviews, 143; needed research, 145
- Bus drivers, 181; insurance, 179; ownership, 179, 192; purchasing, 180
- Bus drivers, salaries, 180
- Business administration, 193; needed research, 187; principles, 183
- Building costs, 157
- Capital costs, trends, 164
- Capital outlays, 191
- Checklists, 140
- Clerks, 184
- Community units, 169
- Consolidation of units, 168
- Costs of education, analysis, 155; building, 157; comparative, 156; estimates, 139; forces affecting, 158; higher education, 158; per pupil, 157; predictions, 159; trends, 155
- Cost of transportation, 180
- County unit, 168
- Credit, limitations and regulations, 163, 191; needed research, 164
- Custodians, 184; inservice training, 185; tenure and retirement, 186
- District reorganization, 167, 192; and economy, 172; obstacles, 174
- Equalization, of educational opportunity, 135
- Extracurriculum activities, accounting for, 148
- Fees, 136
- Federal aid, 139
- Finance, planning, 134, 190
- Higher education, cost, 158
- Inservice training, of custodians, 185
- Insurance, of buses, 179; school, 186
- Internal accounting, 147
- Inventory, 151
- Minimum program, definition, 137
- Needed research, budgeting, 145; in business administration, 187; in credit regulations, 164
- Non-teaching personnel, 183; inservice training, 185; salaries, 185; tenure and retirement, 186
- Personnel administration, 193; principles, 183
- Planning, financial, 134, 190
- Private schools, 140
- Purchasing supplies, 150
- Real estate management, 187
- Reorganization of administrative units, 136; incentives, 171; of school districts, 167
- Reorganization of school districts, 192
- Reporting, financial, 147, 149
- Retirement, of custodians, 186
- Salaries, and cost of living, 185
- State support of education, 139
- Supplies, 147, 150; inventory, 151; purchasing, 150
- Support of education, 134, 190; measures of ability, 138; sources, 137
- Tenure, of custodians, 186
- Transportation, costs, 180, 192; economics, 181; financial aspects, 178; state provisions, 178
- Trends, in capital costs, 164; in school costs, 155